Request for Comments: 651

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25 Oct. 74

NIC 31154
Online file: <[ISI]<DCROCKER>STATUS-OPTION-REVISION.RNO

Revised Telnet Status Option

1. Command name and code

   STATUS 5

2. Command meanings

   As described in the NAOL and NAOP option specifications, this option applies to a simplex connection.

IAC DO STATUS	Sender of DO wishes to be able to send requests for status-of-options information, or confirms that he is willing to send such requests.
IAC WILL STATUS	Sender of WILL wishes or agrees to send status information, spontaneously or in response to future requests.
IAC DON'T STATUS	Sender refuses to carry on any further discussion of the current status of options.
IAC WON'T STATUS	Sender refuses to carry on any further discussion of the current status of options.
IAC SB STATUS SEND IAC SE	Sender requests receiver to transmit his (the receiver's) perception of the current status of Telnet options. The code for SEND is 1. (See below.)
IAC SB STATUS IS ... IAC SE	Sender is stating his perception of the current status of Telnet options. The code for IS is 0. (See below.)

3. Default

   DON'T STATUS/WON'T STATUS. That is, the current status of options will not be discussed.

4. Motivation for the option

This option allows a user/process to verify the current status of Telnet options (e.g., echoing) as viewed by the person/process on the other end of the Telnet connection. Simply renegotiating options could lead to the nonterminating request loop problem discussed in (NIC #16237). The changes to the option, described in this paper, allow STATUS to fit into the normal structure of Telnet options, by deferring the actual transfer of status information to the SB command. Additionally, the numbers of bytes that must be sent to describe the state of the options has been considerably reduced.

5. Description of the option

WILL/DO are now used only to obtain and grant permission for future discussion. The actual exchange of status information occurs within option subcommands (IAC SB STATUS...).

Once the two hosts have exchanged a WILL and a DO, the sender of the WILL STATUS is free to transmit status information, spontaneously or in response to a request from the sender of the DO. At worst, this may lead to transmitting the information twice. Only the sender of the DO may send requests (IAC SB STATUS SEND IAC SE) and only the sender of the WILL may transmit actual status information (within an IAC SB STATUS IS ... IAC SE command).

IS has the subcommands WILL, DO and SB. They are used EXACTLY as used during the actual negotiation of Telnet options, except that SB is terminated with SE, rather than IAC SE. Transmission of SE, as a regular data byte, is accomplished by doubling the byte (SE SE). Options that are not explicitly described are assumed to be in their default states. A single IAC SB STATUS IS ... IAC SE describes the condition of ALL options.

The following is an example of use of the option:

Host1: IAC DO STATUS

Host2: IAC WILL STATUS

(Host2 is now free to send status information at any time. Solicitations from Host1 are NOT necessary. This should not produce any dangerous race conditions. At worst, two IS's will be sent.

Host1 (perhaps): IAC SB STATUS SEND IAC SE

Host2 (the following stream is broken into multiple lines only for readability. No carriage returns are implied.):

IAC SB STATUS IS
WILL ECHO
DO SUPPRESS-GO-AHEAD
WILL STATUS
DO STATUS
WILL RCTE
SB RCTE <11><1><24> SE
DO NAOL
SB NAOL DS <66> SE
IAC SE

Explanation of Host2's perceptions: It is responsible for echoing back the data characters it receives over the Telnet connection; it will not send Go-Ahead signals; it will both issue and request Status information; it will send instruction for controlling the other side's terminal printer; it will discuss the line width for data it is sending.